

REMARKS

Claims 1, 2 and 5-26 are pending in this application. By this Amendment, claims 1, 14 and 16-24 are amended. Various amendments are made for clarity and are unrelated to issues of patentability.

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments: (1) place the application in condition for allowance; (2) do not raise any new issues requiring further search and/or consideration; and/or (3) place the application in better form for appeal, should an appeal be necessary. More specifically, the above amendments are merely for clarity of previously-claimed subject matter. Entry is thus proper under 37 C.F.R. §1.116.

The Office Action rejects claims 1 and 7-25 under 35 U.S.C. §103(a) over U.S. Patent 5,319,707 to Wasilewski et al. (hereafter Wasilewski) in view of U.S. Patent 5,128,665 to Deluca et al. (hereafter Deluca). The Office Action rejects claims 5, 6 and 26 under 35 U.S.C. §103(a) over Wasilewski, Deluca and Applicant's Admitted Prior Art (hereafter AAPA). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites processing a present data frame to be transmitted, the present data frame comprising: a header subframe containing frame mapping information of data to be transmitted to a plurality of terminals, and data subframes containing data multiplexed therein, and to be transmitted to the plurality of terminals at a present time in correspondence to frame mapping information transmitted in a frame in advance of the header subframe of the present frame. Independent claim 1 also recites that the frame mapping information transmitted in the frame in advance of the header subframe of the present frame includes a header subframe

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having subframe numbers arranged in a specific order to correspond to positions of the corresponding multiplexed subframes in the present frame and the frame in advance additionally includes data subframes following the header subframe. Independent claim 1 also recites the frame mapping information transmitted in the frame in advance of the present frame includes the subframe numbers transmitted 'n' frames before the present frame in succession, and the multiplexed data subframes are positioned in the present frame according to an order of transmission of the subframe numbers that is transmitted in the frame in advance of the present frame.

The applied references do not teach or suggest at least these features of independent claim 1. More specifically, the applied references do not teach or suggest features relating to a frame transmitted in advance of the header subframe of the present frame. That is, independent claim 1 specifically recites that the frame mapping information transmitted in the frame in advance of the header subframe of the present frame includes a header subframe having subframe numbers arranged in a specific order to correspond to positions of the corresponding multiplexed subframes in the present frame, and the frame in advance additionally includes data subframes following the header subframe.

When discussing features relating to the mapping information transmitted in the frame in advance of the present frame, the Office Action (on pages 3 and 6) cites Wasilewski's FIG. 13 as showing mapping information transmitted in advance of a present frame. However, FIG. 13 merely shows a subframe map 102 that includes a superframe map length field 210, a subframe virtual channel map count 212, a subframe count 214 and a plurality of subframe starting block

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counts 216. See, for example, Wasilewski's col. 18, line 39-col. 19, line 31. Wasilewski does not teach or suggest that the frame in advance of the present frame includes a header subframe having subframe numbers arranged in a specific order to correspond to positions of the corresponding multiplexed subframes and the frame in advance additionally includes data subframes following the header subframe. Wasilewski's FIG. 13 does not teach or suggest the specific features of the frame in advance of the present frame.

The Office Action (on page 6) also cites Wasilewski's col. 15, lines 3-20, which relates to service seeds transmitted to remote locations in advance of the data the seeds were used to encrypt. This does not teach or suggest a header subframe having subframe number and data subframes following the header subframe.

The Office Action (on page 3) states that Wasilewski fails to disclose subframes arranged in a specific order to correspond to positions of corresponding multiplex subframes. The Office Action then relies on Deluca's FIG. 1 as showing address signal numbers 1-L arranged in a specific order to correspond to positions of the corresponding packets 1-L in the message. However, Deluca does not relate to a frame in advance of the present frame that includes a header subframe having subframe numbers arranged in a specific order to correspond to positions of the corresponding multiplexed subframes in the present frame and the frame in advance additionally includes data subframes following the header subframe.

For at least these reasons set forth above, Wasilewski and Deluca do not teach or suggest all the features of independent claim 1. AAPA does not teach or suggest the missing features. Thus, independent claim 1 defines patentable subject matter.

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Independent claim 16 recites (a) processing data to be transmitted at a present time to form a present frame having subframes, (b) multiplexing the formed subframes of the present frame according to subframe mapping information that is transmitted in a frame in advance of the present frame, wherein the frame in advance of the present frame includes a header subframe having the subframe numbers corresponding to the subframe mapping information, and a plurality of subframes that follow the header subframe of the frame in advance. Independent claim 16 also recites (c) transmitting the multiplexed subframes of the present frame together with subframe mapping information of the subframes to be transmitted after transmitting the present frame, wherein the subframe mapping information includes subframe numbers in a specific order to correspond to positions of formed subframes to be transmitted after the present frame in a subsequent frame.

For at least similar reasons as set forth above, Wasilewski, Deluca and AAPA do not teach or suggest at least these features of independent claim 16. More specifically, Wasilewski and Deluca do not teach or suggest that the subframe mapping information includes subframe numbers in a specific order to correspond to positions of formed subframes to be transmitted after the present frame in a subsequent frame, wherein the frame in advance of the present frame includes a header subframe having subframe numbers corresponding to the subframe mapping information, and a plurality of subframes that follow the header subframe of the frame in advance. Thus, independent claim 16 defines patentable subject matter.

Independent claim 24 recites processing data to be transmitted in a present frame, the data including: a header subframe containing a plurality of subframe numbers relating to data for

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a plurality of terminals, and a plurality of data subframes each containing data to be transmitted to the plurality of terminals, wherein an order of the plurality of data subframes in the present frame identifies an order of subframe numbers that is transmitted in a previous frame prior to transmission of the present frame, wherein the previous frame include a header subframe having the subframe numbers, and a plurality of subframes that follow the header subframe of the previous frame.

For at least similar reasons as set forth above, Wasilewski and Deluca do not teach or suggest at least these features of independent claim 24. More specifically, Wasilewski and Deluca do not teach or suggest that an order of the plurality of data subframes in the present frame identifies an order of subframe numbers that is transmitted in a previous frame prior to transmission of the present frame, wherein the previous frame include a header subframe having the subframe numbers, and a plurality of subframes that follow the header subframe of the previous frame. Thus, independent claim 24 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 16 and 24 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

For example, dependent claim 10 recites that the data subframes are multiplexed in the present frame according to priorities of the terminals. See also dependent claim 20. The Office Action merely cites Wasilewski's FIGs. 1 and 2. However, Wasilewski has no teaching or

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suggestion for multiplexing data subframes according to priorities of terminals. The other applied references do not teach or suggest these features. Thus, dependent claims 10 and 20 define patentable subject matter at least for this additional reason.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 2 and 5-26 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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